UNITED STATES NAVAL OBSERVATORY

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POSITIONS, AREAS, AND COUNTS OF SUNSPOTS
OCTOBER, 1950

By Lucy T. Day

These results are based upon measurements made at the Naval Observatory on plates secured either there or at the Mt. Wilson Observatory. The symbols used for the entries in the successive columns are as follows:

U.T., the epoch of observation in Universal Time.
No., the identifying number of the group assigned by Mt. Wilson.
Δl, the heliographic difference in longitude from the central meridian, measured positive to the west.
φ, the heliographic latitude, measured positive to the north.
ρ, the heliocentric angular distance from the line joining the centers of the Earth and Sun.
A, the true area of the umbra plus penumbra, expressed in millionths of the visible hemisphere.
s, the number of spots.

An asterisk means that no Mt. Wilson number was assigned. Plates secured at the Naval Observatory are indicated by N, and those at Mt. Wilson by W. The plate quality, which follows, is indicated by:

1, Poor; 2, Fair; 3, Good; 4, Very Good; 5, Excellent.

The following five quantities are listed successively at the end of each day, and give for that day:

1. The total number of groups, g.
2. The longitude of the central meridian, L_0.
3. The latitude of the center of the disc, B_0.
4. The total value of A.
5. The total value of s.

The mean daily area and the mean relative sunspot number, $r=10g+s$ are given at the end of the month.

These results are a continuation of those published in the *Monthly Weather Review* from February 1, 1927 to December 31, 1947.

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U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
1.736	10492	−71	+12	71	97	1
N−2	10491	−56	+22	57	242	1
	10490	−46	− 6	47	12	2
	10490	−39	− 7	42	24	1
	10490	−38	− 7	41	61	1
	(3)	(190)	(+7)		436	6
2.636	10492	−58	+12	58	73	1
N−2	10491	−44	+22	45	218	1
	10490	−31	− 7	34	36	5
	10490	−26	− 7	30	109	2
	10490	−25	− 6	29	61	1
	(3)	(178)	(+7)		497	10
3.656	10492	−45	+12	45	73	1
N−3	10491	−31	+22	33	218	1
	10490	−17	− 7	23	97	20
	10490	−12	− 7	18	194	4
	10490	−11	− 6	17	36	1
	(3)	(165)	(+7)		618	27
4.737	10493	−72	+12	72	48	2
N−2	10493	−68	+10	68	24	2
	10492	−30	+12	30	48	1
	10491	−18	+22	23	218	1
	10490	− 3	− 7	15	121	17
	10490	+ 3	− 7	15	145	2
	(4)	(150)	(+7)		604	25
5.631	10493	−60	+12	60	97	6
N−2	10493	−57	+11	57	24	1
	10492	−17	+12	18	24	4
	10491	− 6	+22	16	218	1
	10490	+ 9	− 7	17	36	6
	10490	+15	− 7	22	158	2
	(4)	(138)	(+7)		557	20
6.646	10493	−47	+12	47	61	5
N−3	10493	−43	+11	43	24	3
	10491	+ 7	+22	18	218	1
	1049	+27	− 7	31	170	2
	(3)	(125)	(+6)		473	11
7.597	10493	−33	+12	33	61	13
W−3	10493	−30	+11	30	24	2
	10495	−23	+ 2	24	16	4
	10494	− 4	+15	12	36	8
	10491	+20	+22	26	194	1
	10490	+40	− 7	43	109	2
	(5)	(113)	(+6)		440	30
8.601	10498	−82	−11	82	388	7
W−3	10497	−78	−14	78	291	1
	10496	−75	− 6	77	48	1
	10496	−74	− 5	75	36	4
	10496	−73	− 6	75	145	6

U.T.	No.	Δl	φ	ρ	A.	s
		°	°	°		
	(*)	−35	+ 2	36	12	3
	10493	−23	+12	24	61	15
	10493	−16	+12	17	12	4
	10495	−12	+ 3	12	73	14
	10495	− 9	+ 2	10	12	2
	10495	− 8	+ 7	8	194	01
	10491	+32	+22	35	194	1
	10490	+55	− 7	55	109	6
	(8)	(99)	(+6)		1575	65
9.669	10499	−73	−10	75	48	2
W−3	10498	−68	−11	70	194	4
	10497	−64	−14	67	339	2
	10496	−63	− 6	65	16	5
	10496	−57	− 6	58	73	7
	10493	− 9	+12	11	48	2
	10493	− 3	+11	6	16	3
	(*)	− 7	− 5	13	6	1
	10501	− 3	−15	22	12	1
	10495	+ 3	+ 6	3	12	1
	10495	+ 3	+ 4	3	48	2
	10495	+ 5	+ 4	5	194	1
	10491	+46	+23	48	194	1
	10500	+51	+18	52	24	5
	10500	+51	+22	53	24	7
	10490	+68	− 7	70	97	1
	(11)	(85)	(+6)		1345	47
10.664	10499	−60	−10	62	12	2
N−2	10498	−55	−13	59	242	6
	10498	−54	−13	58	48	1
	10497	−51	−14	56	73	2
	10496	−45	− 5	46	16	4
	10493	+ 4	+12	7	48	12
	10495	+15	+ 3	16	36	13
	10495	+19	+ 2	20	145	1
	10491	+60	+22	61	194	1
	105 0	+64	+20	65	12	02
	10490	+82	− 7	82	048	4
	(9)	(72)	(+6)		874	48
11.695	10504	−52	+20	53	24	2
N−4	10499	−48	−10	52	12	09
	10498	−42	−13	47	242	5
	10497	−38	−14	43	73	6
	10496	−32	− 5	33	6	2
	10493	+18	+ 9	18	24	4
	10493	+21	+ 7	21	12	2
	10495	+32	+ 2	32	145	1
	10502	+52	+12	52	24	2
	10491	+74	+22	74	194	1
	(9)	(58)	(+6)		756	34
12.645	10506	−79	+17	79	109	1
N−3	(*)	−54	+18	55	12	2
	10504	−39	+19	41	24	4
	10498	−29	−13	34	218	10
	10498	−27	−12	32	12	1
	10497	−25	−13	32	48	4

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U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	10493	+32	+11	32	12	21
	10495	+46	+ 3	46	145	1
	10502	+65	+12	65	6	2
	10491	+88	23	88	194	1
	(9)	(46)	(+6)		780	47
13.759	10506	−64	+16	64	48	1
N–2	10508	−33	+ 5	33	24	1
	10504	−25	+18	27	48	2
	10507	−22	−17	32	36	1
	10498	−19	−13	26	61	5
	10498	−13	−12	23	194	4
	10497	−11	−13	23	36	3
	10497	− 9	−13	22	12	2
	10495	+59	+ 3	59	145	1
	(7)	(31)	(+6)		604	20
15.706	10506	−39	+18	40	6	1
N–3	10506	−37	+16	38	61	1
	10507	+ 7	−17	24	267	28
	10498	+12	−13	23	145	6
	10497	+17	−14	26	097	13
	10496	+22	− 7	25	12	3
	10509	+33	+ 3	33	12	5
	10509	+35	+ 1	36	48	2
	(6)	(6)	(+6)		648	59
16.645	10513	−67	+17	67	12	1
N–3	10512	−64	− 9	66	73	1
	10506	−23	+16	25	48	1
	10508	+ 5	+ 5	5	12	1
	10507	+15	−13	24	24	6
	10507	+18	−17	29	73	12
	10507	+21	−17	31	533	10
	10498	+26	−13	32	97	9
	10497	+31	−13	37	97	7
	10509	+50	+ 2	51	12	1
	(8)	(353)	(+6)		981	49
17.720	10513	−53	+17	53	12	3
N–2	10512	−53	− 9	56	73	9
	10512	−49	− 8	51	48	4
	10512	−47	− 8	50	48	1
	10506	−10	+16	14	36	1
	10506	− 7	+14	12	12	5
	10507	+30	−18	39	73	5
	10507	+35	−17	43	582	6
	10498	+33	−11	38	24	3
	10498	+38	−13	42	109	11
	10497	+46	−13	50	061	4
	(6)	(339)	(+6)		1078	52
18.651	10512	−40	− 7	43	73	3
N–2	10512	−37	− 8	41	61	12
	10512	−33	− 7	36	36	2
	10506	+ 4	+16	11	24	1
	10507	+43	−17	50	24	2
	10507	+48	−16	53	339	11
	10507	+51	−17	58	388	5
	10498	51	−13	55	36	5
	10497	+60	−13	63	24	6
	(5)	(327)	(+6)		1005	47
19.668	10512	−27	− 7	31	73	12
N–2	10512	−23	− 8	27	73	4
	10512	−19	− 7	22	24	1
	105 7	+62	−16	67	194	2
	10507	+67	−18	70	339	4
	(2)	(313)	(+6)		703	23
20.651	10515	−58	+ 9	58	12	1
N–2	10512	−13	− 6	17	61	15
	10512	− 7	− 7	14	24	7
	10507	+75	−16	75	145	5
	10507	+80	−18	80	291	1
	(3)	(300)	(+5)		533	29
21.653	10516	− 5	+22	18	16	7
W–3	10512	+ 3	− 6	11	24	7
	10512	+ 6	− 7	13	24	1
	10512	+ 7	− 8	15	24	7
	(2)	(287)	(+5)		88	22
22.621	10512	+13	− 7	17	24	5
W–3	10512	+17	− 7	21	48	1
	10512	+19	− 7	23	24	3
	10512	+20	− 9	24	12	4
	(1)	(274)	(+5)		108	13
23.713	10512	+31	− 7	34	73	6
W–2	10512	+34	− 7	35	61	10
	10512	+36	− 7	38	73	12
	(1)	(260)	(+5)		207	28
24.676	10517	+ 7	+16	13	12	1
W–3	10512	+43	− 7	45	121	16
	10512	+48	− 7	50	109	9
	(2)	(247)	(+5)		242	26
25.705	10518	−17	+29	29	61	8
W–2	10512	+57	− 7	58	194	4
	10512	+62	− 7	63	145	7
	(2)	(234)	(+5)		400	19
26.679	10520	−75	− 4	75	145	1
N–3	10519	−71	−13	73	73	2
	10519	−69	−13	70	97	4
	10512	+70	− 6	70	194	1
	10512	+78	− 7	78	97	4
	(3)	(221)	(+5)		606	12

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U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
27.651	10521	−80	+22	80	97	1
N−3	10520	−62	− 4	62	194	3
	10519	−57	−13	60	97	6
	10519	−54	−13	57	73	6
	10518	+13	+29	27	6	2
	(4)	(208)	(+5)		467	18
28.636	10523	−79	+12	79	388	4
N−2	10521	−68	+22	68	48	1
	10520	−49	− 4	51	121	1
	10519	−46	−13	50	73	4
	10519	−38	−12	42	97	1
	10519	−33	− 8	35	6	2
	10519	−25	−15	32	12	1
	10522	+43	+15	44	61	5
	(5)	(195)	(+5)		806	19
29.684	10523	−70	+13	70	145	3
N−3	10523	−65	+13	65	194	1
	10523	−63	+11	63	73	1
	10521	−55	+22	57	24	1
	10526	−51	− 6	53	12	1
	10520	−38	− 5	40	24	8
	10520	−36	− 4	37	97	1
	10519	−31	−12	35	73	7
	10519	−25	−12	30	24	4
	10519	−24	−12	30	48	1
	10525	+23	+18	26	24	6
	10524	+37	+29	43	48	4
	10524	+39	+29	42	36	6
	10522	+55	+15	57	61	6
	10522	+59	+15	59	97	1
	(8)	(181)	(+5)		1077	51

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
30.659	10523	−59	+12	59	73	3
N−3	10523	−52	+13	53	194	1
	10523	−51	+11	51	121	4
	10521	−42	+22	44	12	3
	10526	−40	− 6	43	36	1
	10526	−38	− 4	41	24	10
	10526	−36	− 4	37	24	2
	10520	−24	− 4	25	73	1
	10519	−18	−12	25	73	9
	10519	−12	−12	21	36	1
	10519	−10	−11	19	145	1
	10524	+49	+28	52	36	5
	10524	+51	+30	55	73	3
	10522	+68	+15	68	48	2
	10522	+74	+15	74	97	5
	(7)	(168)	(+5)		1065	51
31.748	10523	−44	+15	45	12	5
N−2	10523	−42	+14	43	12	1
	10523	−38	+13	39	170	2
	10523	−36	+12	37	97	4
	10526	−26	− 5	27	48	5
	10526	−24	− 7	27	24	1
	10526	−20	− 5	23	48	1
	10520	− 8	− 4	13	36	2
	10519	− 2	−13	18	12	4
	10519	+ 2	−13	18	12	3
	10519	+ 5	−11	17	145	1
	10524	+67	+29	68	36	1
	(5)	(154)	(+5)		652	30

Mean for 30 days, A=674, r=80.6